MANAS RURAL DEVELOPMENT INSTITUTE

ACTIVITY REPORT

YEAR - 2022-2023

ADDRESS

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From Chairman's Desk

Agriculture is the backbone of Indian economy, as we are growing hundreds of cereals, pulses, oil seeds, fruits and vegetables. In addition, rearing of milk animals, fishes, honeybees and silk worms has become an integral part of our economy. By virtue of hard work of the Agricultural Scientists and farmers, we have attained green revolution, white revolution, brown revolution and golden revolution. Now, we are talking of rainbow revolution and it is hoped that we are approaching towards it with great sincerity and the day is not far when we will achieve it. Now, mushroom growing, honeybee rearing (Apiculture), sericulture, aquaculture, dairying, piggery, ornamental fish culture, processing of fruits and vegetables are few important areas where our policy makers and planners are giving utmost attention. Considering the importance of Agriculture has introduced some preliminary. So that students could understand something about Agriculture at entry level. This course has been introduced with the following objectives:

- To create awareness about various breeds of animals, poultry, fishes and their importance. To impart knowledge about package of practices for growing various crops.
- To create awareness about cereals, pulses, oilseed crops, important fruits, vegetables and flowers.
- To impart basic knowledge on major insect-pests and diseases of various crops, animals and measures to protect them by various means.
- To create awareness about post-harvest management, value addition and its importance in our daily life. To provide basis knowledge on entrepreneurship skill in different Agri-Business.

I am fully confident that after getting basic knowledge, students will get several ideas and opportunities which Agriculture can offer them in their future life. They can also think of joining this sector in their future life and can develop themselves as successful entrepreneurs in several such areas.

Manas, Thane (Vyankatesh Kulkarni)

Chairman

MANAS RURAL DEVELOPMENT INSTITUTE

Annual Activity Report for the Year 2022-2023

Manas Rural Development Institute (MARDI) has pleasure to present this 18th Activity Report for the year ended 2022-2023. The Company is registered under the provisions of Section 25 of Company Act, 1956. The provisions depict the Company as “Non Profit Company”.

Manas Krushi Farm is a successful model of organic farming because:

- Farmers from villages are trained in organic farming are able to meet their goal of self sustainability.
- They are successful in maintaining their cultural heritage by practicing Ancient Indian techniques.
- They optimize the utilization of resources.

Larger Vision

- During the period 2001-05 the focus of the activity was on organic farming alone.
- It was accepted by the farmers from the surrounding villages with overwhelming response.
- Hence it was felt necessary to bring all the activities under organized platform and further continue with the spreading them over larger base.
- The activities developed during this period were mainly on seed production program in association with the Mahabeej and providing marketing support to the farmers for the produce.
- The sailing was smooth between 2005 to 2008 where it became necessary to broaden our vision and maintain organic farming as sustainable activity with help of “rural agriculture infrastructure development”
- The vision prompted change in the name to “Manas Rural Development Institute”.

Our Achievements

- Structured on our working experience in the field, we started evolving a model of Organic Agriculture activities.
- This model supports the main activity of Organic Agriculture and ensures overall development of farmers and surrounding villages.
- We started conducting awareness programmes for the benefit of farmers and women self help groups.
- Suitable cropping pattern was devised to augment the farm income of the farmers
- Two season cropping was achieved with the help of creating irrigation facilities and financial and marketing support.
- In order to increase the income of the farmers we in association with Mahabeej undertook the activity of Paddy Seed production program.
- We started supplying Paddy Seeds procured from Mahabeej to the farmers advising them to adopt suitable package of practices.
- To promote organic farming in the adjoining villages we distributed Gir cows at subsidized rate to the farmers, since organic farming practices are mainly cow centric.
- The activity first started in 10 villages with 131 farmers in the year 2004-05 with total seed production of 22 tonnes has now extended to 20 villages with more than 1000 farmers with total seed production of more than 600 tonnes.
- Through adoption of revised cropping pattern and paddy seed production program It was noticed that on an average the farm income increased from Rs. 8000 to Rs. 15,000.

Our Strength today

- Three centers of our NGO viz Thane of Maharashtra, Rajkot of Gujarat and Maheshwar of Madhya Pradesh.

- About 3000 acres are certified organic and rest in under “in conversion” process.
- About 1600 tonnes seed was produced and sold to Mahabeej.
- Marketing tie-up was developed for more than 6500 tonnes of farm produce successfully.
- Well equipped Organic Farming Training Centre

Future Vision

- It was felt that mere organic farming will not increase the household income substantially unless it is backed by strong marketing.
- It was also felt that the rural youths should also have regular income source as that of salaried employee in order to prevent their migration to cities.
- To achieve this we envisaged the holistic rural development model.
- Holistic Rural Development Model conceived by the MARDI addresses overall issues besides the agriculture promotion like social development, Compliance of Energy needs, Financial Support and Marketing of agriculture produce.
- The project that MARDI initiated is “Eco Friendly Partnership between Farmers and Consumers.
- It envisages the cultivation of organic crop and supplying to end consumer duly processed.

The Adverse Impacts of Green Revolution Technology (GRT) on Indian Agriculture include:

1. Alteration in soil pH levels, disrupts natural soil reactions.
2. Development of nutrient imbalances and deficiencies due to excessive reliance on synthetic fertilizers.
3. Damage to soil flora and fauna, essential components of soil health and ecosystem functioning.

4. Reduction in earthworm activity is crucial for soil fertility and nutrient cycling.

5. Decrease in soil humus and organic matter content, affecting soil structure and nutrient retention.

6. Excessive water use for high-yielding crops leads to groundwater depletion and reduced water availability.

7. Emphasis on a few high-yielding varieties reduces genetic diversity, making crops more vulnerable to pests and climate change.

8. Economic challenges for Small-scale farmers due to high cost of inputs, widening income disparities.

9. Chemical runoff polluting water sources, harming aquatic life and human health.

10. Changes in atmospheric composition due to the release of greenhouse gases and other pollutants.

11. Intensive farming practices eroding soil fertility and structure, reducing land productivity.

12. Reduction in overall agricultural productivity over time.

13. Deterioration in the quality of agricultural produce, affecting nutritional value and marketability.

14. Destruction of soil structure leading to poor aeration and water retention capacity.

15. Emergence of more resilient pests and diseases poses challenges to crop management and yield protection.

These issues diminish productivity and degrade soil health and natural ecosystems. Additionally, the rural economy faces challenges of over-reliance on synthetic inputs, coupled with fluctuating prices and increased market competition due to globalization and trade liberalization under the World Trade Organization (WTO). Recognizing the importance of quality alongside quantity, alternative farming systems have emerged, such as organic farming, natural farming, biodynamic

agriculture and others. These practices emphasize the principle of "giving back to nature," focusing on nurturing soil health to sustain ecosystems. Organic farming prioritizes soil health, biodiversity and sustainable agricultural practices among these alternatives. It ensures the long-term viability of agricultural systems and promotes environmental well-being.

REPORT OF FIELD VISIT TO DIARY PLANT

As a part of NSS day (September 24th, 2023), the Department of Public Health Dentistry, Azeezia College of Dental Sciences and Research, NSS unit organized a field visit to Manas Dairy plant.

Manas dairy plant established as milk chilling plant in Shahapur District & later it was developed onto a milk processing plant. Now this Manas dairy has a processing capacity of more than 2 lakh liters of milk per day. The main product of this daily is milk & also they produce Manas ghee, Manas curd, Manas Sambaram , Manas Buttermilk and various other products such as butter, peda etc brought from other dairy for sale in Manas.

Products:-

- Manas Milk: – They mainly produce 2 types of milk in the basis of fat content. They are Manas smart & Manas rich plus. Manas smart contains 1.5%. fat & 9% SNF (solid-not-fat). It is available in 500ml packet. Manas rich-plus contains 37% fat of 9% SNF. It is also available in 500 ml packet.
- Manas Ghee: – produced from pure milk Groom. It is available in 50g, 100g, 500g, 1kg, as per the customer requirements.
- Manas curd:- produced from pasteurizing – skimmed milk using curd culture .Available in 200ml packet.
- Manas Buttermilk - produced form pure millk. it is available in 100ml, 200ml, 500ml as per customer requirements.

ORGANIC FARMING VISITORS :

Organic farming in India is not a new concept; it has been practiced since ancient times. This method focuses on cultivating land and raising crops to maintain

soil health by using organic wastes such as crop, animal, farm and aquatic wastes and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops, ensuring sustainable production in an eco-friendly, pollution-free environment. Many scientists at various levels have elaborated on the concept of organic farming, providing important descriptions as follows.

We have so far successfully conducted Training Workshops for other Institutions like ATMA, Agriculture and Forest Departments of Maharashtra State and for other NGOs like Prasad Chikitsalaya, Sukhbhumi and Durvankur where the participation was around 50-60. In addition to this regular educational trips and visits of the school children and college students are being regularly arranged. Farmer's educational trips from adjoining districts are also successfully arranged.

The major visits during the year as follows:

Sr.No.	**Name of Organization**	**No of Visitors**
1	Visit of the farmer's Clubs, Kalyan under ATMA	**40**
2	Visit of the Lady Officers, Dena Bank	**25**
3	Members of Industry Owners, Vapi	**23**
4	Visit of the Students, Neral Mumbai	**73**
5	Visit of the students of Yusuf Govt College,Jogeshwari	**60**
6	Visit of the farmer's Clubs, Murbad under ATMA	**40**

.2. Providing Crop Nutrients Indirectly: Utilizing relatively insoluble nutrient sources that are made available to plants through the action of soil microorganisms, ensuring a sustainable nutrient supply.

3. Achieving Nitrogen Self-Sufficiency: Using legumes and biological nitrogen fixation, along with effective recycling of organic materials such as crop residues and livestock manures, to provide necessary nitrogen to the soil.

4. Controlling Weeds, Diseases and Pests Naturally: Relying on crop rotations, natural predators, biodiversity, organic manuring, resistant crop varieties and limited (preferably minimal) thermal, biological and chemical interventions to manage agricultural challenges.

5. Extensive Livestock Management: Addressing livestock needs for nutrition, housing, health, breeding and rearing with consideration for their natural behaviors and welfare.

6. Environmental and Wildlife Conservation: Minimizing farming's environmental impact, promoting wildlife conservation and maintaining ecological balance and biodiversity.

ADVANTAGES OF ORGANIC FARMING FOR SHAHAPUR VILLAGE :

1. Improved Soil Conditions: Organic manures create optimal soil conditions for high yields and quality crops by supplying necessary nutrients and enhancing plant growth and physiological activities.

2. Enhanced Soil Physical Properties: Organic farming improves soil physical properties such as granulation, tilth, aeration, root penetration and water-holding capacity. Organic matter aids in soil aggregation, enhancing permeability and aeration in clay soils and water retention in sandy soils.

3. Enhanced Soil Chemical Properties: It promotes nutrient supply, retention and favorable chemical reactions in the soil, contributing to long-term soil fertility.

4. Reduction in Input Costs: Organic farming reduces dependency on purchased inputs such as synthetic fertilizers and pesticides.

5. Environmental Benefits: It minimizes pollution by utilizing organic wastes as fertilizers instead of allowing their accumulation and it helps prevent environmental degradation.

INTERCROPS AND MIXED CROPPING TRAINING FOR STUDENTS :

As done in the past the Department of Agriculture, Thane Division has utilized our Organic Farming Training infrastructure for their staff and farmers for conducting various programmes related to Rain Fed farming, Farmers' Groups Farming, Organic Farming etc. In order to increase the income level of the rice growing farmers these programs were arranged. The programme was chaired by Shri Mahavir Jangate, D.S.A.O. of Thane district. Shri Ajay Patil and Shri V.B.Barve addressed the farmers

on the subject. The scientists from K.V.K. Kosbad and Rice Research Station Karjat of Konkan Krushi Vidyapeeth also addressed the participants.

The programme was also attended by the members of the women SHGs from the villages in large numbers. Dr S M Kshirsagar gave in brief about the promotion of SHGs in rural areas and agro-based income generating activities to be undertaken by the groups. The participants from Shahapur, Kalyan and Bhiwandi Talukas attended the program in good number.

Intercropping is the growing of two or more crops together in proximity on the same land. As a result, two or more crops are managed at the same time. This method helps farmers to grow variety of food together in the same patch of land yielding at different time intervals. This method is followed to increase the productivity of crops.

With minimum water availability, if farmer plans to grow pulses, oil seeds and grains for his family's yearly needs, then mixed cropping is a best way. This method is followed to reduce the risk of crop failures due to unfavourable climatic conditions. This method is largely adopted by rain-fed farmers. We promote mixed cropping to farms which have less water and intercropping for farms with enough water for cultivation.

ORGANIC FARMING PRACTICES IN SAJIWALI, SHAHAPUR :

Organic farming is not new to Indian farming community. Several forms of organic farming are being successfully practiced in diverse climate, particularly in rain fed, tribal and hill areas of the country. Much of the forest produce of economic importance like herbs, medicinal plants, etc., by default come under this category. Among all farming systems, organic farming is gaining wide attention among farmers, entrepreneurs, policy makers and agricultural scientists for varied reasons such as it minimizes the dependence on chemical inputs (fertilizers; pesticides; herbicides and other agro-chemicals) thus safeguards/improves quality of resources and environment, it is labour intensive and provides an opportunity to increase rural employment and achieve long term improvements in the quality of resource base.

Organic agriculture may be defined as a kind of diversified agriculture wherein crops and livestock are managed through use of integrated technologies with

preference to depend on resources available either at farm or locally. It emphasizes more on optimising the yield potential of crops and livestock under given set of farming conditions rather than maximization.

FARMER TRAININGS IN FARM HALL - FOOD AND SUSTAINABILITY :

We have beautifully established Manas Rural Development Institute to facilitate the training on organic farming. The training establishment includes one spacious Training Hall which can accommodate more than 300 audiences at a time, Two Class rooms with the sitting capacity of 30 each with the high quality benches and one spacious office and Directors chamber for Resource Faculties. All audio-video requirements for professional learning such as Slide projector, Mike system, CDs, DVDs, Laptops etc, are effectively fulfilled. Residential quarters for stay of Resource Faculties and Dormitory for the participants have been constructed.

Farming has become commercially unviable to many farmers in India, as our pattern of agriculture changed in the recent few decades. Earlier we used to live as joint families mostly in the farm or near by the farm and we had livestock attached to the farm. We had produced for our own consumption, for the cattle, for the farm labours and the rest went to the nearby local markets.

Our own family members used to work in the farm, we had our own seeds saved from the previous crop, we had cows to plough the land, we had a sense of water resource management and we never had borewells, and we never depend on anything from outside to run the farm.

Things changed! Cows had gone for slaughter houses from 1900s. We could not produce farm manures which we had produced earlier from cow dung and urine. We had to depend on tractors to plough the land. Farmers had to buy and rent tractors, machineries, manures and fertilizers. Because of the rise in expenses, farming became unviable to continue. Farmers requested their sons and daughters to get into other industries to survive.

Then labours for the farm work from own family also extinguished. Farmers had started hiring labours for all the work. Farming becomes unsustainable and farmers got into debts. Now, what should be done to put back everything on its old routine? That’s the area we train farmers on,

IMPORTANCE OF ORGANIC FARMING FOR SHAHAPUR FARMAR :

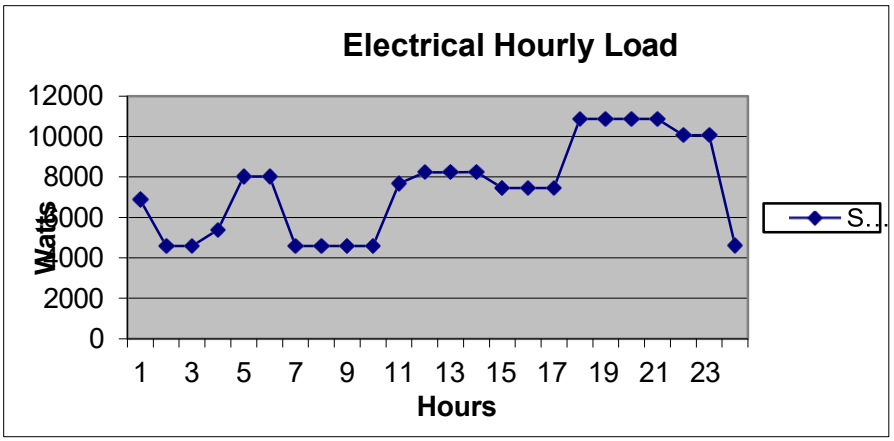
Organic farming is crucial today as conventional agriculture faces challenges like soil erosion, water depletion, loss of biodiversity and declining soil fertility exacerbated by unsustainable agronomic practices. These factors, coupled with demographic pressures, threaten our ability to sustain food production in the long term.

While modern agriculture initially increased food grain production, it heavily relies on chemical inputs like fertilizers and pesticides. This reliance not only degrades soil quality and productivity over time but also contaminates water sources and affects biodiversity. Moreover, the excessive use of pesticides in crops like paddy, cotton and vegetables further compounds environmental and health risks.

ENERGY SURVEY OF VILLAGE SAJIVALI :

The sample energy survey of Village Sajivali was Conducted of each house hold and energy consumption per hour was recorded. The out come is tabulated hereunder This was done from the perspective of using the solar equipment.

Essential Gadgets Wattage				Extra Electrical Gadgets Wattage						Ele	Monthly Bill Rs	
Fan	Y Lts	4' T	CFL	Fridge	Mixer	DVD	TV	other	Total	Units	Elec	Water
4240	840	941	844	1200	4000	240	2280	2800	17385	2111	4955	1170
80%	100%	100%	100%	100%	20%	5%	100%	20%				



CONCLUSION :

Organic farming presents a sustainable alternative to conventional agricultural practices, addressing the adverse impacts of the Green Revolution by emphasizing soil health, biodiversity and ecological balance. It fosters long-term agricultural viability and environmental well-being. While organic farming offers numerous advantages, such as improved soil conditions, healthier food and environmental benefits, it also faces challenges including small holding sizes, infrastructure deficits and lower yields for certain crops. Despite these challenges, the adoption of organic farming is essential for securing future food production, protecting natural resources and promoting sustainable development in agriculture.

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